15th International Conference on
Intelligent Systems Design and Applications *(ISDA15)*

5th World Congress on
Information and Communication Technologies *(WICT15)*

11th International Conference on
Information Assurance and Security *(IAS15)*

.:: **Marrakesh, Morocco December 14-16, 2015** ::.

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IEEE region8 IEEE GFC Groupement de Formation Continue ENSIAS CIGMA CNRST e-NGN

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ISDA / IAS / WICT - Program at a Glance
14-16 December 2015 - Marrakesh, Morocco

Time	14 December 2015	15 December 2015	16 December 2015
8:30 - 9:00	Registration	Registration	Registration
9:00 - 9:30	Registration	Registration	Registration
9:30 - 10:00	Opening		
10:00 - 11:00	Keynote I — Mohamed Essaidi (Morocco)	Keynote II — Aawatif Hayar (Morocco) ISDA 10: 133, 91, 1 ISDA 13: 53, 15, 76, 81, 89, 135	Keynote VI — Layth Sliman (France) ISDA 24: 64, 9, 131 ISDA 28: 10, 70, 139
11:00 - 11:30	Coffee break	Coffee break ISDA 11: 57, 2, 152 ISDA 14: 49, 35, 146, 56, 124, 27	Coffee break ISDA 25: 21, 59, 77 ISDA 29: 29, 127, 94
11:30 - 12:30	ISDA 1: 17, 14, 19, 126, 61, 84 ISDA 2: 24, 80, 138, 39, 122, 101 ISDA 3: 30, 47, 58, 90, 54, 51 IAS 1: 13, 15, 31, 32, 33, 40 WICT 1: 5, 29, 30, 53, 54, 58, 60	Keynote III — Ghita Mezzour (Morocco) ISDA 12: 60, 52, 31 ISDA 15: 96, 82, 148, 32, 105, 137	Keynote VII — Thierry Moniquet (France) ISDA 26: 72, 147, 88 ISDA 30: 63, 108, 129
12:30 - 1:30	Lunch	Lunch IAS 4: 8, 11, 23, 34 IAS 5: 6, 10, 18, 21, 30, 39, 41	Lunch ISDA 27: 74, 128, 144 ISDA 31: 69, 93, 113, 119
1:30 - 3:00	ISDA 4: 37, 145, 25, 34 ISDA 5: 43, 40, 46, 73 ISDA 6: 41, 86, 52, 143 IAS 2: 12, 17, 19, 20, 25 WICT 2: 15, 23, 24, 27	Keynote IV — Abdel Belaid (France) Keynote V — Michel Voll (France) WICT 4: 3, 14, 38, 52 WICT 5: 18, 32, 37, 39, 40, 43, 45, 47	Awards & Closing Session
3:00 - 4:00		ISDA 13–15 / IAS 5 / WICT 5 (parallel sessions)	
4:00 - 4:20	Coffee break	Coffee break	
4:20 - 4:50	ISDA 7: 42, 150, 156, 11 ISDA 8: 75, 8, 13, 120 ISDA 9: 44, 95, 116, 6 IAS 3: 9, 16, 22, 43, 44 WICT 3: 9, 11, 13, 20	ISDA 16: 87, 20, 121 ISDA 17: 130, 140, 142 ISDA 18: 36, 45, 103 ISDA 19: 102, 22, 55	Marrakesh visit
4:50 - 5:00			
5:00 - 5:30		ISDA 20: 104, 7, 12 ISDA 21: 100, 123, 136 ISDA 22: 115, 85, 98 ISDA 23: 132, 23, 33	
5:30 - 6:10			
6:10 - 6:30			
8:00pm	Gala Dinner		

Plenary Talk I

Time: 10:00am – 11:00am

Location: room 1

Chairs: Pr. Ajith Abraham, Machine Intelligence Research Labs (MIR Labs), Washington, USA

Pr. Aawatif Hayar, Hassan II University, Casablanca, Morocco

Smart Cities Technologies, Opportunities and Challenges

Pr. Mohamed Essaaidi

IEEE Senior Member, Director of ENSIAS

Mohammed V University, Rabat, Morocco

Biography

Mohamed Essaaidi is Prof. Dr. IEEE Senior Member. He has been the Dean of National College of Information Technology (ENSIAS) of Mohammed 5th University, Rabat, Morocco since December 2011 and he was a Professor of Electrical & Computer Engineering at Abdelmalek Essaadi University, Morocco from 1993 till 2011. He is the founder and Chairman of the IEEE Morocco Section, founder of IEEE Computer & Communication Societies Joint Morocco Chapter, Founder and Chair of IEEE Antennas and Propagation Society and Microwave Theory and Techniques Society Morocco Joint Chapter and founder of IEEE Education Society Morocco Chapter. He has been also the founding Director of the Morocco Office of Arab Science and Technology Foundation, ASTF (2006-2009) and the Coordinator of ASTF RD&I Network of Electro-Technology since 2006. He has also founded several IEEE Student Branches in different Moroccan universities and engineering schools. He has authored and co-authored 5 books and more than 120 papers in international refereed journals and conferences in the field of Electrical, Information and Communication Technologies. He has been the Editor-in-Chief of International Journal on Information and Communication Technologies, Serial Publications, India since 2007. He is also an active member of the editorial boards of several IEEE and other indexed international journals in the field of information and communication technologies. Prof. Essaaidi is the founder and the General Chair of the Mediterranean Microwave Symposium since the year 2000, he was the General Chair of Information and Communication Technologies International Symposium in 2005 and 2007, the International Conference on Multimedia Systems and Computing in 2009, 2011 and 2012 and the International Conference on Complex Systems in 2012. He has also been involved in the Organizing and Scientific Committees of several other international conferences held worldwide.

ISDA - Oral Session 1

Time: 11:30am – 01:30pm

Location: room 1

Chairs: Pr. Khalid Zine-Dine, Faculty of Sciences, Chouaib Doukali University, El Jadida, Morocco

Pr. Driss El Ouadghiri, Faculty of Sciences, Moulay Ismail University, Meknès, Morocco

#17 **Online Arabic Writer Identification based on Beta-Elliptic Model**

Thameur Dhieb, Wael Ouarda, Houcine Boubaker, Mohamed Ben Halima and Adel Alimi
REGIM-Lab.: REsearch Groups in Intelligent Machines University of Sfax, ENIS, BP 1173, Sfax, 3038, Tunisia

#14 **Word-Based Arabic Handwritten Recognition Using SVM Classifier with a Reject Option**

Bouchra El Qacimy, Mounir Ait Kerroum and Ahmed Hammouch
Laboratory LRGE, ENSET of Rabat, Mohamed V University Rabat, Morocco;
Laboratory LARIT, Ibn Tufail University,Faculty of Science, ENCG of Kenitra, Kenitra, Morocco

#19 **Arabic handwritten text line extraction using connected component analysis : from a multi agent perspective**

Youssef Boulid, Abdelghani Souhar and Mohamed Youssfi Elkettani
Department of Mathematics, Faculty of Sciences University Ibn Tofail Kenitra, Morocco

#126 **Recognizing Arabic Handwritten Script using Support Vector Machine classifier**

Mohamed Elleuch, Houssem Lahiani and Monji Kherallah

National School of Computer Science (ENSI), University of Manouba, Tunisia
Advanced Technologies for Medicine and Signals (ATMS), University of Sfax, Tunisia
National School of Electronics and Telecommunications, Univesrity of Sfax, Sfax, Tunisia
Faculty of Sciences, University of Sfax, Tunisia

#61 **Scene Text Detection Images With Pyramid Image and MSER Enhanced**

Houssem Turki, Mohamed Ben Halima and Adel Alimi

REGIM-Lab.: "REsearch Groups in Intelligent Machines,University of Sfax, ENIS, BP 1173, Sfax, 3038, Tunisia"

#84 **Pre-processing and Extraction of the ROIs steps for Palmprints Recognition System**

Mokni Raouia, Zouari Ramzi and Kherallah Monji

Faculty of Economics and Management of Sfax , Road Aeroport Km 4, 3018 Sfax, Tunisia, University of Sfax.

ISDA - Oral Session 2

Time: 11:30am – 01:30pm

Location: room 2

Chair: Pr. Mohamed Essaaidi, Mohammed V University, Rabat, Morocco

#24 **A New Motion Estimation Techniques for Video Coding**

Mahmoud Ahmadi, Ahlem Walha, Ali Wali and Adel Alimi
REGIM-Lab.: Research Groups in Intelligent Machines ENIS, University of Sfax BP 1173, Sfax 3038, Tunisia

#80 **Object Detection and Identification for Blind People in Video Scene**

Hanen Jabnoun, Faouzi Benzarti and Hamid Amiri
LR-11-ES17 Signal, Images et Technologies de l'Information (LR-SITI-ENIT),Université de Tunis El Manar, Ecole Nationale d'Ingénieur de Tunis, 1002, Tunis Le Belvédère, Tunisie

#138 **A spatio-temporal covariance descriptor for person re-identification**

Hadj Kacem Bassem, Ayedi Walid, Abid Mohamed and Snoussi Hichem
CES Research Laboratory, National Engineering School of Sfax, University of Sfax, Sfax, Tunisia
LM2S Research Unit, Charles Delaunay Institute, University of Technology of Troyes, Troyes, France

#39 **Real-time parallel implementation of road traffic radar video processing algorithms on a parallel architecture based on DSP and ARM processors**

Abdessamad Klilou, Lhoussein Mabrouk, François Bourzeix, Omar Bourja, Yahya Zennayi and Said Belkouch

Embedded System Department Moroccan Foundation for Advanced Sciences, Innovation and Research-MAScIR, Rabat, Morocco
University of Cadi Ayyad, Marrakech, Morocco

#122 **A semiotic semi-automatic annotation for movie audiovisual document**

Manel Fourati, Abir Chaari, Anis Jedidi and Faiez Gargouri

Laboratory MIR@CL, University of Sfax, Sfax, Tunisia

#101 **Interlinking Video programs with Linked Open Data**

Olfa Ben Said, Ali Wali and Adel Alimi

REGIM-Lab.: Research Groups in Intelligent Machines ENIS, University of Sfax BP 1173, Sfax 3038, Tunisia

ISDA - Oral Session 3
Time: 11:30am – 01:30pm
Location: room 3
Chair: Pr. Adel M. Alimi, Regim-LAB, University of Sfax, Tunisia

#30 **Controlled Automatic Query Expansion Based on a New Method Arised in Machine Learning for Detection of Semantic Relationships Between Terms**

Nesrine Ksentini, Mohamed Tmar and Faiez Gargouri
MIRACL Laboratory University of Sfax Sfax,

#47 **Heuristic approaches to Double Vehicle Routing Problem with Multiple Stacks**

Ulisses E. F. Da Silveira, Marcelo P. L. Benedito and André G. Santos
Departmento de Informática, Universidade Federal de Viçosa, Viçosa, Minas Gerais, Brazil

#58 **A parallel heuristic for the travel planning problem**

Breno A. Beirigo and André G. Santos
Departamento de Informática, UFV – Universidade Federal de Viçosa, Viçosa - MG, Brazil

#90 **A distributed guided genetic algorithm to solve the disturbance in the multimodal transport**

Najet Medssia and Khaled Ghedira
SOIE, University of Tunis Management Higher Institute,41, Rue de la liberte, Cite Bouchoucha Le Bardo2000, Tunisie

#54 **ONDAR : An Ontology for Home Automation**

Achraf Lyazidi and Salma Mouline
LRIT - CNRST URAC29, Mohammed V University - Rabat4, Avenue Ibn Battouta, B.P. 1014 RP, Rabat, Morocco

#51 **Towards type-2 Fuzzy Rule Base System for road choice**

Mariam Zouari, Sahar Cherif, Habib M. Kammoun, Hela Lajmi and Adel Alimi
REGIM-Lab: REsearch Groups in Intelligent Machines, University of Sfax, National Engineering School of Sfax (ENIS), BP 1173, Sfax, 3038, Tunisia

IAS - Oral Session 1

Time: 11:30am – 01:30pm

Location: room 4

Chairs: Pr. Abdelkrim Haqiq, Hassan 1st University, Settat, Morocco

Pr. Ghita Mezzour, International University of Rabat, Morocco

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#13   **Mining Intrusion Detection Alerts for Predicting Severity of Detected Attacks.**

Doaa Hassan

National Telecommunication Institute, Egypt.

#15   **Toward a Novel Rule-based Attack Description and Response Language.**

Samih Souissi

Télécom ParisTech, France.

#31   **Security Modeling and Analysis of a Self-Cleansing Intrusion Tolerance Technique.**

Iman El Mir, Dong Seong Kim and Abdelkrim Haqiq

FST, Hassan 1 st University, Settat, Morocco; University of Canterbury, New Zealand

#32   **Network Intrusion Detection System Using L1-norm PCA.**

Khalid Chougdali, Zyad Elkhadir and Mohammed Benattou

National School of Applied Sciences (ENSA); RLCST Research Laboratory, Ibn Tofail University, Morocco.

#33   **New malware detection framework based on N-grams and Support Vector Domain Description.**

Mohamed El Boujnouni, Mohammed Jedra and Noureddine Zahid

Mohammed V – University, Faculty of Sciences, Laboratory of Conception and Systems Avenue Ibn Battouta B.P 1014, Rabat, Morocco

#40   **Towards Better Attack Path Visualizations Through Normalizing Host and Network IDS Alerts.**

Amir Azodi

WICT - Oral Session 1

Time: 11:30am – 01:30pm

Location: room 5

Chairs: Pr. Emilio Corchado, Universidad de Salamanca, Spain

Pr. Hichem Karray, Regim-LAB, University of Sfax, Tunisia

#5   **Forming the Multi-Modal Situation Context in Ambient Intelligence Systems on the Basis of Self-Organizing Cognitive Architectures**

Peter Ivanov, Zalimkhan Nagoev, Inna Pshenokova and Dana Tokmakova

#29   **Multiagent system for urban traffic regulation mesuring**

Abdallah Lakhouili,El Hassan EssoufiandHicham Medromi

#30   **A new Hybrid Discrete Bat Algorithm for Traveling Salesman Problem using ordered crossover and 3-Opt operators for bat's local search**

Marek Žák, Jaroslav Rozman and František V. Zbořil

Faculty of Information Technology Brno University of Technology Brno 612 66, Czech Republic

#53   **Cognitive Behavioural Therapy embedding smoking cessation program using smart phone Technologies**

Abdullah Alsharif and Nada Philip

#54   **A Comparative Study of four Metaheuristics Applied for solving the Flow-shop Scheduling Algorithms**

Abdelhamid Bouzidi, Mohammed Essaid Riffi and Mohammed Barkatou

#58   **Perspectives on the implementation of standardization within the UK library RFID market**

Ian PrattandShiyun Zhong

#60   **Big Data: Measuring How Information Technology Can Improve the Economic Growth and Better Life**

Soumaya Nouinou, Rindra M. Razafimampianina, Boubker Regragui and Abdelaziz S. Doukkali

ISDA - Oral Session 4

Time: 03:00pm – 04:20pm

Location: room 1

Chair: Pr. Noureddine Idboufker, ENSA, Cadi Ayyad University, Marrakesh, Morocco

#37   **Improved recurrent neural network architecture for SVM learning**

Rahma Fourati, Chawki Aouiti and Adel Alimi
REGIM-Lab.: REsearch Groups in Intelligent Machines, University of Sfax, ENIS, Sfax, Tunisia

#145   **A hybrid system based on GMM-SVM for Speaker Identification**

Rania Chakroun, Leila Beltaïfa Zouari, Mondher Frikha and Ahmed Ben Hamida
Advanced Technologies for Medicine and Signals (ATMS) Research UnitNational School of Electronics and Telecommunications of Sfax,
National School of Engineering of Sousse, Sousse, Tunisia
National School of Engineering of Sfax, Sfax, Tunisia

#25   **Determination of an Optimal Feature Selection Method Based on Maximum Shapley Value**

Fatiha Mokdad, Djamel Bouchaffra, Nabil Zerrouki and Azzedine Touaz
Center for Development of Advanced Technologies, Design and Implementation of Intelligent Machines Laboratory, Algeria; University of Science and Technology Houari Boumediene, Algeria

#34   **Overview of Bio-Inspired Control Mechanisms for Hexapod Robot**

Marek Žák, Jaroslav Rozman and František V. Zbořil
Faculty of Information Technology Brno University of Technology Brno 612 66, Czech Republic

ISDA - Oral Session 5

Time: 03:00pm – 04:20pm

Location: room 2

Chair: Pr. Chokri Ben Amar, Regim-LAB, University of Sfax, Tunisia

#43   **A Deep Convolutional Neural Wavelet to supervised Arabic letter image classification**

Salima Hassairi, Ridha Ejbali and Mourad Zaied
REGIM-Lab: REsearch Groups in Intelligent Machines, University of Sfax, National Engineering School of Sfax (ENIS), BP 1173, Sfax, 3038, Tunisia

#40 **Hand verification system based on multi-features fusion**

Nesrine Charfi, Hanene Trichili, Basel Solaiman and Adel Alimi

Department of Image and Information Processing (ITI), Telecom-Bretagne (ENST) Brest, France

REGIM-Lab.: REsearch Groups in Intelligent Machines, University of Sfax, ENIS, BP 1173, Sfax, 3038, Tunisia

#46 **ANOFS: Automated Negotiation based Online Feature Selection Method**

Fatma Ben Said and Adel M. Alimi

REGIM-Lab.: REsearch Groups in Intelligent Machines, University of Sfax, ENIS, BP 1173, Sfax, 3038, Tunisia

#73 **Exponential synchronization of high-order recurrent neural networks with mixed delays**

Hajer Brahmi, Boudour Ammar, Farouk Chérif and Adel Alimi

REGIM-Lab.: REsearch Groups in Intelligent Machines, University of Sfax, ENIS, BP 1173, Sfax, 3038, Tunisia

Laboratory of Math Physics, Ecole Superieure des Sciences et de Technologie de Sousse, Tunisia

ISDA - Oral Session 6
Time: 03:00pm – 04:20pm
Location: room 3
Chair:Pr. Abir Hadriche, Regim-LAB, University of Gabes, Tunisia

#41 **A static hand gesture recognition system for real time mobile device monitoring**

Hanene Elleuch, Ali Wali and Adel Alimi

REGIM-Lab.: REsearch Groups in Intelligent Machines, University of Sfax, ENIS, BP 1173, Sfax, 3038, Tunisia

#86 **Model Driven Reverse Engineering: Graph Modeling For Mobiles Platforms**

Khalid Lamhaddab and Khalid Elbaamrani

TIM Laboratory, ENSA, Cadi Ayyad University, Marrakech, Morocco

#52 **Facial emotions recognition based on wavelet network**

Mounira Hmayda, Ridha Ejbali and Mourad Zaied

REGIM-Lab.: REsearch Groups in Intelligent Machines, University of Sfax, ENIS, BP 1173, Sfax, 3038, Tunisia

Polytech Tours, University of Tours, France

#143 **Structured Fisher Vector encoding method for Human Action Recognition**

Manel Sekma, Mahmoud Mejdoub and Chokri Ben Amar

REGIM-Lab.: REsearch Groups in Intelligent Machines, University of Sfax, ENIS, BP 1173, Sfax, 3038, Tunisia

Department of computer science, College of AlGhat, P.O.BOX 445, 11914, Majmaah university, Al Majmaah, Riyadh Kingdom of Saudi Arabia

IAS - Oral Session 2

Time: 03:00pm – 04:20pm

Location: room 4

Chairs: Pr. Nizar Rokbani, Regim-LAB, University of Sousse, Tunisia

Pr. Hajar Mousannif, Faculty of Sciences Semlalia, Cadi Ayyad University, Marrakesh, Morocco

#12	**Introduction to The Internet Of Things Security : standardization and research challenges**
	Salim Elbouanani, Ahmed El Kiram and Omar Achbarou
	Cadi Ayyad University, Morocco.
#17	**Modeling a Secure Cloud Data Warehouse with SoaML**
	Emna Guermazi, Mounir Ben Ayed and Hanane Ben-Abdallah
	Cadi AyyadUniversity, Morocco.
#19	**Digital Safe: Secure synchronization of shared files**
	Mayssa Jemel, Mounira Msahli and Ahmed Serhrouchni
	Telecom ParisTech, France.
#20	**Public Auditing for Secure Data Storage in Cloud through a Third Party Auditor Using Modern Ciphertext**
	Zaid Alaa Hussien, Hai Jin, Zaid Ameen Abduljabbar, Ali A. Yassin, Mohammed Abdulridha Hussain, Salah H. Abbdal and Deqing Zou
	University of Basrah, Iraq ; HuazhongUniversity of Science and Technology, China.
#25	**MASAT: Model-based Automated Security Assessment Tool for Cloud Computing**
	Oussama Mjihil, Dong Seong Kim and Abdelkrim Haqiq
	FST, Hassan 1st University, Morocco; University of Canterbury, New Zealand

WICT - Oral Session 2

Time: 03:00pm – 04:20pm

Location: room 5

Chair: Pr. Ilhem Kallel, Regim-LAB, University of Sfax, Tunisia

#15	**Android: Deep look into Dalvik VM**
	Er-Rajy Latifa and El Kiram My Ahmed
#23	**Improvement of Location Aided Routing Protocol for Vehicular Ad Hoc Networks in** Highway Scenario
	Mohamed Nabil, Abdelmajid Hajami and Abdelkrim Haqiq
#24	**Fairness and differentiation of services in wireless mesh network**
	S.Jounaidi, B.Nassereddine, Y.Saadi, A.Haqiq
#27	**Actor Network Theory As A Collaborative Mode: The Contribution Of Game Theory In The Interessement Phase**
	Mohammed Salim Benqatla, Chikhaoui Dikra, Bouchaib Bounabat

ISDA - Oral Session 7

Time: 04:50pm – 06:10pm

Location: room 1

Chair: Pr. Ali Wali, Regim-LAB, University of Sfax, Tunisia

#42	**Bag Of Face Recognition Systems Based on Holistic Approaches**
	Wael Ouarda, Hanen Tricheli and Adel M.Alimi
	REGIM-Lab.: REsearch Groups in Intelligent Machines, University of Sfax, National School of Engineers (ENIS), BP 1173, Sfax, 3038, Tunisia
	Telecom Bretagne Institute, Brest Iroise Technopole, 29238 Brest Cedex France
#150	**A Measurement-Based Technique for Incipient Anomaly Detection**
	Fouzi Harrou and Ying Sun
	CEMSE Division, King Abdullah University of Science and Technology, Saudi Arabia
#156	**Enhanced Monitoring of Abnormal Emergency Department Demands**
	Fouzi Harrou, Ying Sun and Farid Kadri
	CEMSE Division, King Abdullah University of Science and Technology, Thuwal 23955-6900, Saudi Arabia
	PIMM Laboratory, UMR CNRS 800, Arts et Métiers ParisTech, Paris, France,
#11	**Speech Emotion Recognition Based on Arabic Features**
	Mohamed Meddeb, Hichem Karray and Adel Alimi
	REGIM-Lab.: REsearch Groups in Intelligent Machines, University of Sfax, National School of Engineers (ENIS), BP 1173, Sfax, 3038, Tunisia

ISDA - Oral Session 8

Time: 04:50pm – 06:10pm

Location: room 2

Chair: Pr. Mohamed Ben Halima, Regim-LAB, University of Sfax, Tunisia

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#75	**Consolidating Product Spectrum and Gammatone Filterbank for Robust Speaker Verification under noisy conditions**
	Meriem Fedila, Messaoud Bengherabi and Abderrahmane Amrouche
	Centre de Développement des Technologies Avancées. Division Télécom. Cité du 20 Août 1956, BP n° 17 Baba Hassen, 16303,
	Speech Com. & Signal Proc. Lab. Faculty of Electronics and Computer Sciences, USTHB, Bab Ezzouar, 16 111, Algiers, Algeria
#8	**Possibilistic Network based Information Retrieval Model**
	Kamel Garrouch and Omri Mohamed Nazih
	MARS Research Unit Faculty of Science of Monastir University of Monastir, Tunisia
#13	**SAID : A new Stemmer Algorithm to Indexing Unstructured Document**
	Kabil Boukhari and Mohamed Nazih Omri
	MARS Research Unit Faculty of Science of Monastir University of Monastir, Tunisia
#120	**An Architecture of Distributed Beta Wavelet Networks for large image classification in MapReduce**
	Sakkari Mohamed and Zaied Mourad
	REGIM-Lab.: REsearch Groups in Intelligent Machines, University of Sfax, ENIS,BP 1173, Sfax, 3038, Tunisia

ISDA - Oral Session 9
Time: 04:50pm – 06:10pm
Location: room 3
Chair: Pr. Habib M. Kammoun, REGIM-Lab., University of Sfax, Tunisia

#44	**Audiovisual Video Characterization using Audio Watermarking Scheme**
	Eya Mezghani, Maha Charfeddine, Henri Nicolas and Chokri Ben Amar
	REGIM-Lab.: REsearch Groups in Intelligent Machines, University of Sfax, ENIS,BP 1173, Sfax, 3038, Tunisia
	Laboratoire Bordelais de Recherche en Informatique, University of Bordeaux, France

#95	**Clustering impact on group-based traitor tracing schemes**
	Faten Chaabane, Maha Charfeddine and Chokri Ben Amar
	REGIM-Lab.: REsearch Groups in Intelligent Machines, University of Sfax, ENIS,BP 1173, Sfax, 3038, Tunisia

#116	**A Dynamic Threshold-based Probabilistic Scheme for Broadcasting in MANETs**
	Mohammed Chekhar, Khalid Zine-Dine, Mohamed Bakhouya and Abdessadek Aaroud
	Dept. of computer science, Chouaib Doukkali University El Jadida, Morocco International University of Rabat, Parc Technopolis 11 100 Sala el Jadida, Morocco

#6	**A speech recognition system using fast learning algorithm and beta wavelet network**
	Ridha Ejbali, Olfa Jemai, Mourad Zaied and Chorki Ben Amar
	REGIM-Lab.: REsearch Groups in Intelligent Machines, University of Sfax, ENIS,BP 1173, Sfax, 3038, Tunisia

IAS - Oral Session 3
Time: 04:50pm – 06:10pm
Location: room 4
Chair: Pr. Yassine Aribi, Regim-LAB, University of Sfax, Tunisia

#9	**Personal Recognition System using Hand Modality based on Local Features**
	Nesrine Charfi, Hanene Trichili, Adel M. Alimi and Basel Solaiman
	ENIS, Tunisia ; ISBS, Tunisia ; ENST Bretagne, France.

#16	**Improved secure navigation of wheelchairs using multi-robot system and cloud computing technologies**
	Khaled Salhi, Mohamed Moncef Ben Khelifa, Adel Alimi and Philippe Gorce
	Regim-Lab, University of Sfax, Tunisia; Handi-Bio, France.

#22	**EMV Card Evaluation based on Neural Network**
	Ouerdi Noura, Elfarissi Ilhame, Azizi Mostafa and Azizi Abdelmalek
	Mohammed FirstUniversity, Morocco.

#43	**Image de-noising of a metal matrix composite microstructure Using Surelet wavelet and Weighted Bilateral Filter**
	Ayari Fatma and Ben Amar Chokri
	Regim-lab, ENIS, Tunisia.

#44	**Image processing of a metal matrix composite microstructure Using recent bilateral filtering approaches**
	Ayari Fatma and Ben Amar Chokri
	Regim-lab, ENIS, Tunisia.

WICT - Oral Session 3
Time: 04:50pm – 06:10pm
Location: room 5
Chair: Pr. Hichem Karray, Regim-LAB, University of Sfax, Tunisia

#9   **Impact of integrating WebRTC in universities e-learning platforms**
Samuel Ouya,Khalifa Sylla,Pape Mamadou Djidiack Faye,Mouhamadou Yaya SowandClaude Lishou

#11   **Toward a Multi-tenant College Sustained Team Seeking System**
Shuwei Yao,Kun Ma, Yang Zhe andAjith Abraham

#13   **Proposal of a collaborative software development platform for the virtual universities: the Virtual University of the Senegal (UVS) experience**
Samuel Ouya,Kokou Gaglo,Gervais Mendy,Ahmath Bamba MbackŽandClaude Lishou

#20   **WebRTC platform proposition as a support to the educational system of universities in a limited Internet connection context**
Samuel Ouya,Cheikhane Seyed,Ahmath Bamba MbackŽ,Gervais MendyandIbrahima Niang

ISDA - Oral Session 10

Time: 09:00am – 10:00am

Location: room 1

Chair: Pr. Adel M. ALIMI, Regim-LAB, University of Sfax, Tunisia

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#133   **Real Time Hand Gesture Recognition System for Android Devices**

Houssem Lahiani, Mohamed Elleuch and Monji Kheralla

National School of Electronics and Telecommunications, Univesrity of Sfax, Sfax,Tunisia

National School of Computer Science (ENSI), University of Manouba, Manouba, Tunisia

Faculty of Sciences, Univesrity of Sfax, Sfax,Tunisia

#91   **An efficient algorithm for data security in cloud storage**

Azougaghe Ali

SIME, Mohammed V University, ENSIAS Rabat, Morocco

LRIT, Mohammed V University, Faculty of Sciences Rabat, Morocco

#1   **A framework for an effective cybersecurity strategy implementation: Fundamental pillars identification**

Hasna Elkhannoubi and Mustapha Belaissaoui

University Hassan I, ENCG, Laboratory SIAD, Settat - Morocco

ISDA - Oral Session 11

Time: 09:00am – 10:00am

Location: room 2

Chairs: Pr. Abdelkrim Haqiq, Hassan 1st University, Settat, Morocco

         Pr. Driss El Ouadghiri, Faculty of Sciences, Moulay Ismail University, Meknès, Morocco

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#57   **Data fusion architectures: A survey and comparison**

Siwar Ben Ayed, Hanene Trichili and Adel M. Alimi

REGIM-Lab.: REsearch Groups in Intelligent Machines, University of Sfax, ENIS,BP 1173, Sfax, 3038, Tunisia

#2   **Make or Buy decision making for telcos Towards an "Intelligent Transaction Cost Economics (TCE) Support System"**

Mounir Boukadidi

CEDOC Technologies d'Information et Management d'Entreprise (TIME), ENSIAS, Rabat, Morocco

#152   **Decode and Forward Relaying ARQ: Performance Analysis and Power Optimization**

Ali Kamouch, Abdelaali Chaoub and Zouhair Guennoun

Laboratory of Electronic and Communication, Mohammadia School of Engineers, Mohammed V-Agdal University, Rabat, Morocco

Dept of Telecommunication, National Institute of Posts and Telecommunications, Rabat, Morocco

ISDA - Oral Session 12

Time: 09:00am – 10:00am

Location: room 3

Chair:Pr. Ilhem Kallel, Regim-LAB, University of Sfax, Tunisia

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#60   **Wavelet Networks for Facial Emotion Recognition**

Salwa Said, Olfa Jemai and Mourad Zaied

REGIM-Lab.: REsearch Groups in Intelligent Machines, Univ. of Sfax, ENIS, Tunisia

#52   **Facial emotions recognition based on wavelet network**

Mounira Hmayda, Ridha Ejbali and Mourad Zaied

Higher Institute of Computer and Multimedia of Gabes, Erriadh City campus, 6075 Zrig - Gabes, Tunisia

#31   **Vigilance Measurement System Through Analysis of Visual and Emotional Driver's Signs Using Wavelet Networks**

Ines Teyeb, Olfa Jemai, Mourad Zaied and Chokri Ben Amar

REGIM-Lab.: REsearch Groups in Intelligent Machines, University of Sfax, ENIS,BP 1173, Sfax, 3038, Tunisia

IAS - Oral Session 3

Time: 09:00am – 10:00am

Location: room 4

Chair: Pr. Ali Wali, Regim-LAB, University of Sfax, Tunisia

#8   **An Efficient Scheme for Anonymous Communication in IoT**

Sara Jebri, Mohamed Abid and Ammar Bouallegue

IResCoMath Unit,NationalEngineeringSchool of GabesUniversity of Gabes, Tunisia.
National EngineeringSchool of TunisUniversity of Tunis El ManarTunis, Tunisia.

#11   **Access Control Policies Enforcement in a Cloud Environment: Openstack**

Meryeme Ayache, Mohammed Erradi and Bernd Freisleben

ENSIAS, Morocco; University of Marburg, Germany.

#23   **Experimental study of continuous variable quantum key distribution**

Nedra Benletaief, Houria Rezig and Ammar Bouallegue

Ensias, Morocco ; University Mohamed V, Faculty of Sciences Rabat, Morocco.

#34   **Access Control in a Collaborative Session in Multi Tenant Environment**

Mohamed Amine Madani, Mohammed Erradi and Yahya Benkaouz
ENSIAS, Mohammed V University of Rabat, ENSIAS, Morocco.

WICT- Oral Session 3

Time: 09:00am – 10:00am

Location: room 5

Chair: Pr. Mohamed Ben Halima, Regim-LAB, University of Sfax, Tunisia

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#3   **Model-To-Model transformation in approach by modeling: From UML model to Model-View-Presenter and Dependency Injection patterns**

Redouane Esbai and Mohammed Erramdani

#14   **Using Cloud SaaS to ensure communication in heterogeneous Cloud based environment**

Majda ElhozmariandAhmed Ettalbi

#38   **A preliminary study on indicator framework for enterprise, based on COBIT 5 processes and SOA approach**

Rindra M. Razafimampianina, Soumaya Nouinou, Abdelaziz S. Doukkali and Boubker Regragui

#52   **Optimization the queries execution plan in cloud data warehouses**

Ettaoufik Abdelaziz and Ouzzif Mohammed

Plenary Talk II

Time: 10:00am – 11:00am

Location: room 1

Chair: Pr. Ajith Abraham, Machine Intelligence Research Labs (MIR Labs), Washington, USA

Frugal Social Sustainable Smart City for Casablanca

Aawatif Hayar

Hassan II University, Casablanca, Morocco

Biography

Prof. Aawatif HAYAR received the "Agrégation Génie Electrique" from Ecole Normale Supérieure de Cachan in 1992. She received the "Diplôme d'Etudes Approfondies" in Signal processing Image and Communications and the degree of Engineer in Communications Systems and Networks from ENSEEIHT de Toulouse in 1997. She received with honors the Ph.D. degree in Signal Processing and Communications from Institut National Polytechnique de Toulouse in 2001. She was research and teaching associate at EURECOM's Mobile Communication Department from 2001 to 2010. Aawatif Hayar is currently with GREENTIC R&D Organization (Morocco) as General Secretary and expert in cognitive green ICT field. She has also joined in 2011 the engineering school ENSEM at the University Hassan II Casablanca in Morocco. Aawatif Hayar is also member of Casablanca "Avant-garde" City think-tank. Her research interests includes fields such as cognitive green communications systems, UWB systems, smart grids, smart cities, ICT for eco-friendly smart socio-economic development. Aawatif Hayar was a Guest Editor of Elsevier Phycom Journal Special issue on Cognitive Radio Algorithms and System Design in 2009 and General Co-chair of Crowncom2010 (France) dedicated to cognitive radio systems and IW2GN2011 (Morocco) dedicated to wireless green systems. She was co-organiser of GDR-ISIS Cognitive Radio workshop in France in 2011. Aawatif Hayar was also General co-chair of ICT 2013 Conference (Morocco). She is also expert at the European commission level for cognitive and UWB systems. Aawatif Hayar received with one of her PhD students the "best student paper" award at CogArt2010 and has a patent in cognitive radio field on "Process for sensing vacant bands over the spectrum bandwidth and apparatus for performing the same based on sub space and distributions analysis".

Abstract

Casablanca was recently selected, with Kansas City USA, by IEEE Smart City Initiative to engage as IEEE Core Smart Cities. The two cities were selected from more than 15 applicants as the cities that provided the most compelling evidence they are well positioned to utilize the resources offered through the IEEE Smart Cities Initiative and by demonstrating plans to invest human and financial capital into their project. The social frugal smart city concept we are adopting in Casablanca puts citizens at the center of the transformation process, creating a public-private-people partnership where citizens are actors in and builders of their smart city. It aims to reconcile citizens with their « City » and society making them feel that they count in « the city transformation process». It is a frugal approach based on the use of existing or new implemented infrastructure including mobiquitous devices, such as smartphones, to develop IT driven innovation cycle and e-services that track and answer citizens economic cultural, social and ecological needs. This participatory oriented social innovation approach will allow, step by step, to build a set of interconnected pilot projects and sites to set up gradually a sustainable smart city collaborative innovation ecosystem creating at the end a social sustainable economy which turns societal and economic challenges into a business opportunities.

Plenary Talk III

Time: 10:00am – 11:00am

Location: room 2

Chairs: Pr. Abdelkrim Haqiq, Hassan 1st University, Settat, Morocco

Pr. Hajar Mousannif, Faculty of Sciences Semlalia, Cadi Ayyad University, Marrakesh, Morocco

A Socio-Technical Approach to International Cyber-Security

Ghita Mezzour

International University of Rabat, Morocco

Biography

Ghita Mezzour is an Assistant Professor at the International University of Rabat. She received her Ph.D. degree from Carnegie Mellon University (CMU) in the United States in May 2015. At CMU, she was part of both the School of Computer Science and the Electrical and Computer Engineering Department. Her research interests are at the intersection of cyber security, big data, and socio-technical systems. She holds a Master and a Bachelor in Communication Systems from the Ecole Polytechnique Fédérale de Lausanne in Switzerland.

Abstract

Studying international aspects of cyber security requires taking into account both technical and social dimensions. However, the majority of cyber security research has only focused on the technical dimension. In my work, I study international cyber-security using a sociotechnical approach that combines data science techniques, computational models, and network science techniques. I will start by presenting my work on empirically identifying factors behind international variation in cyber-attack exposure and hosting. I use data from 10 million computers worldwide provided by a key anti-virus vendor. The results of this work indicate that reducing attack exposure and hosting in the most affected countries requires addressing both social and technical issues such as corruption and computer piracy. Then, I will present a computational methodology to assess countries' cyber warfare capabilities. The methodology captures political factors that motivate countries to develop these capabilities and technical factors that enable such development. Together, these projects show that bridging the social and technical dimensions of cyber security can improve our understanding of the dynamics of international cyber security and have a real-world impact

ISDA - Oral Session 13

Time: 11:30am – 01:30pm

Location: room 1

Chair: Pr. Noureddine Idboufker, ENSA, Cadi Ayyad University, Marrakesh, Morocco

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#53   **Spider's behavior for ant based clustering algorithm**

Amira Hamdi, Nicolas Monmarché, Mohamed Slimane and Adel Alimi

REGIM-Lab.: REsearch Groups in Intelligent Machines, University of Sfax, ENIS,BP 1173, Sfax, 3038, Tunisia

Polytech Tours, University of Tours, France

#15   **Fuzzy logic mobile robot velocity control for autonomous navigation**

Emna Baklouti, Mohamed Jallouli and Nader Ben Amor

Ecole Nationale d'Ingénieur de Sfax ENIS - Universite de Sfax, Tunisie - Computer & Embedded Systems Laboratory (CES)

#76   **Multi-agent systems and their application to control vehicle underwater**

Miftah Ettibari, Sayouti Adil and Medromi Hicham

The National Higher School of electricity and mechanics, Casablanca, Morocco

The School Royal Naval, the National Higher School of electricity and mechanics, Casablanca, Morocco

#81   **A simulation-based Genetic Algorithm approach for refilling process with Clip Type Passive Manipulator**

Honglei Che, Zongzhi Wu, Rongxue Kang, Chao Yun and Hui Jin

China Academy of Safety Science and Technology, Chao Yang District, Bei Jing, China.

State Administration of Work Safety of China, Dong Cheng District, Bei Jing, China

Robotics Institute, School of Mechanical Engineering & Automation, Beihang University, XueYuan RoadBei Jing, China

#89   **RUDA - Robot for Search for Human Beings in Debrits and Avalanches**

Radim Luža, Zbořil František and Martin Drahanský

Department of Intelligent Systems - Faculty of Information Technology, Brno University of Technology, Brno, Czech Republic

#135   **Optimization algorithms, Benchmarks and Performance Measures : from Static to Dynamic Environment**

Raja Fdhila, Adel M. Alimi

REGIM-Lab.: REsearch Groups in Intelligent Machines, University of Sfax, ENIS,BP 1173, Sfax, 3038, Tunisia

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ISDA - Oral Session 14

Time: 11:30am – 01:30pm

Location: room 2

Chair: Pr. Adel M. Alimi, Regim-LAB, University of Sfax, Tunisia

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#49   **Quality of Services based routing using Evolutionary Algorithms for Wireless Sensor Network**

Faten Hajjej, Ridha Ejbali and Mourad Zaied

REGIM-Lab.: REsearch Groups in Intelligent Machines, University of Sfax, ENIS,BP 1173, Sfax, 3038, Tunisia

#35   **Power Aware Scheme for water pipeline monitoring based on Wireless Sensor Networks**

Manel Elleuchi, Manel Boujelben, M. Obeid Abdulfattah, Mohammed S. BenSaleh and Mohamed Abid

CES research unit, National School of Engineers of Sfax ResearchCenter in Informatics, Multimedia and Digital Data Processing (CETIC), Technopark Sfax, Tunisia Sfax, Tunisia;

National Center for Electronics, Communications and Photonics, King Abdulaziz City for Science and Technology, Riyadh, Kingdom of Saudi Arabi

#146   **Energy Benefits of Opportunistic Device-Centric Wireless Networks**

Baldomero Coll Perales and Javier Gozalvez

Ubiquitous Wireless Communications Research Laboratory (UWICORE, http://www.uwicore.umh.es/)

Universidad Miguel Hernandez de Elche (UMH), Avda. de la Universidad sn, 03202, Elche, Alicante, Spain

#56   **A model Driven Approach to generate Graphical User Interfaces for Rich Internet Applications Using Interaction Flow Modeling Language**

Sarra Roubi, Mohammed Erramdani and Samir Mbarki

MATSI Laboratory, Ecole Suprieure de Technologie Oujda, Morocco; Department of Computer Science, Ibn Tofail University Kenitra, Morocco

#124   **Encryption as a service for securing data in mobile cloud computing**

Mouhib Ibtihal, El Ouadghiri Moulay Driss and Zine-Dine Khalid

University Moulay Smail, Faculty of sciences, Meknes, Morocco, University Chouaib Doukkali Faculty of sciences El Jadida , Morocco

#27   **Designing Energy Efficient Smart Buildings in Ubiquitous Environments**

Imen Abdennadher, Nesrine Khabou, Ismael Bouassida Rodriguez and Mohamed Jmaiel

ReDCAD, University of Sfax, B.P. 1173, 3038 Sfax, Tunisia

CNRS, LAAS, 7 avenue du colonel Roche, F-31400 Toulouse, France

Univ de Toulouse, LAAS, F-31400 Toulouse, France

Research Center for Computer Science & Multimedia of Sfax Technopark of Sfax, B.P.275, Sakiet Ezzit, 3021 Sfax, Tunisia

ISDA - Oral Session 15
Time: 11:30am – 01:30pm
Location: room 3
Chair: Pr. Mohamed Ben Halima, Regim-LAB, University of Sfax, Tunisia

#96   **MRI Brain Tumor Classification using Support Vector Machines and Meta-Heuristic Method**

Ahmed Kharrat, Mohamed Ben Halima and Mounir Ben Ayed

REGIM-Lab.: REsearch Groups in Intelligent Machines, University of Sfax, ENIS, BP 1173, Sfax, 3038, Tunisia

#82   **Improving the stability of sequential forward variables selection**

Silvia Cateni and Valentina Colla

TeCIP InstituteScuola Superiore Sant' AnnaPisa, Italy

#148   **Towards an intelligent evaluation method of medical data visualizations**

Saber Amri, Hela Ltifi and Mounir Ben Ayed

REGIM-Lab.: REsearch Groups in Intelligent Machines, University of Sfax, ENIS, BP 1173, Sfax, 3038, Tunisia

Faculty of sciences and techniques of Sidi Bouzid, University of Kairouan

#32 **Morphological extraction of cancerous nucleus in the diagnostics of breast cancer**

Tiia Ikonen, Billy Braithwaite, Irene Pöllänen, Keijo Haataja, Pekka Toivanen, Teemu Tolonen and Jorma Isola

School of Computing, Kuopio campus University of Eastern Finland, P.O. Box 1627, FI-70211 Kuopio, Finland

Institute of Biomedical Technology, University of Tampere, Biokatu 8, FI-33520 Tampere, Finlan

#105 **Literature Review: Home Health Care**

Brahim Issaoui, Issam Zidi, Eric Marcon, Frederique Laforest and Khaled Ghedira

University of Tunis, Management Higher Institute, SOIE, Tunisia

University of Jean Monnet, LaHC, France

INSA Lyon, DISP, France

#137 **Noise Adaptive FCM algorithm for segmentation of MRI brain images using local and non-local spatial information**

Nitesh Arora and Rajoo Pandey

National Institute of Technology, Kurukshetra

IAS - Oral Session 5
Time: 11:30am – 01:30pm
Location: room 4
Chairs: Pr. Khalid Zine-Dine, Faculty of Sciences, Chouaib Doukali University, El Jadida, Morocco
Pr. Driss El Ouadghiri, Faculty of Sciences, Moulay Ismail University, Meknès, Morocco

#6 **A Lightweight Privacy-Preserved Spatial and Temporal Aggregation of Energy Data**

Sye Loong Keoh, Yi Han Ang and Zhaohui Tang

University of Glasgow, Singapore ; Republic Polytechnic, Singapore.

#10 **Persistent Timeout Policy of SCTP associated with AODV by using Cross-Layer Mechanism**

Issoufou Tiado Mahamadou, Idrissa Abdou and Djibo Karimou

Université Abdou Moumouni, Niger ; Université de Tahoua, Niger.

#18 **Robust Image Document Authentication Code with Autonomous Biometric Key Generation, Selection, and Updating in Cloud Environment**

Zaid Ameen Abduljabbar, Hai Jin, Zaid Alaa Hussien, Ali A. Yassin, Mohammed Abdulridha Hussain, Salah H. Abbdal and Deqing Zou

HuazhongUniversity of Science and Technology, China; University of Basrah, Iraq.

#21 **Software-Defined Networks, Security Aspects Analysis**

Jaouad Benabbou, Khalid Elbaamrani, Noureddine Idboufker and Raja Elassali

ENSA, Morocco.

#30 **Side channel analysis techniques towards a methodology for reverse engineering of JavaCard byte-code**

Mohammed Amine Kasmi, Mostafa Azizi and Jean-Louis Lanet

ESTO, Morocco ; INRIA, France.

#39 **An Incremental Refinement Approach to a Development of TMN Protocol**

Sanae El Mimouni and Mohamed Bouhdadi

LMPHE laboratory, Faculty of Sciences, Mohammed V University, Morocco.

#41 **An electronic voting system based on homomorphic encryption and prime numbers**

Ali Azougaghe, Zaid Kartit, Mostafa Benmiloud Mustapha Hedabou, Mostafa Belkasmi and *Mohamed El Marraki ENISIAS, Marroco.*

WICT - Oral Session 5
Time: 11:30am – 01:30pm
Location: room 5
Chair: Pr. Ali Wali, Regim-LAB, University of Sfax, Tunisia

#18 **A Quantification Model of Internal Control Impact on Banking Risks**

Marie Ndaw

#32 **Cloud Model based Group Privacy Preservation Mechanism for Dynamic Data-sets**

Ruxiang Zhai, Kun Zhang and Mingjun Liu

#37 **Interdependencies Modeling for the purpose of critical infrastructures protection**

Lamiae Chtioui, Amine Baina and Mostafa Bellafkih

#39 **Toward resilience management in critical information infrastructure**

Yaou Hamida, Baina Amine, Bellafkih Mostafa

#40 **Using EBIOS for risk management in critical information infrastructure**

Wissam Abbass, Amine Baina and Mostafa Bellafkih

#43 **Study of the credibility of the information shared by a wireless sensor network**

Karim Lahma, Hamraoui Mohamed and Belhadoui Hicham

#45 **Iterative Threshold Decoding of One Step Majority Logic Decodable Quasi-Cyclic Codes**

Karim Rkizat, Mohammed Lahmer and Mostafa Belkasmi

#47 **Tr-OrBAC: A Trust model for Collaborative Systems within Critical Infrastructures**

Nawal Ait Aali, Amine Baina and Loubna Echabbi

Planary Talk IV

Time: 03:00pm – 04:00pm, Location: room 1

ChairsPr. Ghita Mezzour, International University of Rabat, Morocco

Generative-Discriminative Based Methods for Arabic Recognition

Abdel Belaid

Université de Lorraine, France

Biography

Abdel Belaïd received his Ph.D degree in Computer Science in 1979 and his D.Sc. in 1987 from the University Henri Poincaré Nancy I, France. After a few years as Assistant Professor, he joined the National Center for Scientific Research (CNRS) as a Research Scientist in 1984. In 2002, he became full Professor in Université de Lorraine and responsible of the Cognitive Science Master. He leads since 1992 a research group at the LORIA (http://read.loria.fr/) working on Document Analysis and Text Recognition. His areas of research include Image Processing, Pattern Recognition, Document Analysis and Handwriting Recognition where he has authored over 150 articles which have been published in international journals and conferences. He is the co-author of a book, Pattern Recognition: Methods and Applications, and of many book chapters. He has developed retro-conversion techniques for document structure recognition using multi-agent systems, reasoning based cases, emergent architectures and part of speech tagging. For text printed, he developed several systems based on Neural classifiers and a on a combination of OCR and ICR techniques. He developed handwriting recognition systems based on stochastic modeling, for linear and bi-dimensional representations. Abdel Belaïd has a wide national and international visibility as he acts in several program committees and editorial boards such as International Journal on Document Analysis and Recognition, Pattern Recognition, Pattern Recognition Letters, IEEE PAMI, ICDAR where he is PC co-chair, etc. He has several collaborations with several universities and high schools (IUF Fribourg – Switzerland, ENIT, ESSTT – Tunisia, PUC in Brasil, ISI – Calcutta India, ETS – Montréal), and industrial companies (Xerox France, ITESFOT, A2iA, BergerLevrault, Jouve, La Poste, Universalis, etc.) with whom he developed several systems. He belongs to several scientific committees.

Abstract

The recognition of handwriting by computer remains a challenging task. Despite the impressive progress achieved during the last few decades and the increasing power of the computers, the performances of the automatic systems remains still far from the human capabilities. In this talk, we describe our experience combining two different paradigms in machine learning: generative and discriminative learning for the effective recognition of Arabic handwriting. Two main examples were considered to illustrate the feasibility of these approaches on writing recognition. In generative methods, starting with Hidden Markov Models (HMM) with order 1 and 2, we progressively extended HMM to the plane by proposing a planar-HMM. Faced to their dimensionality limit, we experimented Dynamic Bayesian Networks. Then, to combine the advantages of the dimensionality and the temporality of the models, we proposed a new approach which integrates causal Markov Random Field in two dimensional modeling and HMMs. The word image is viewed as a random field realization which at its turn is considered to be an observation sequence of pixel columns. We then showed different applications of this model, first for analytical recognition, second for syntactic analysis by incorporating structural information as implant. In discriminative methods, Neural Networks were the basis of the research. Based on a cognitive model, we proposed a transparent neural network where the learning is replaced by an activation process considering the nodes neighborhood. This model was extended for the recognition of decomposable words in large vocabulary context.

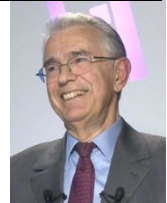**Planary Talk V**

Time: 03:00pm – 04:00pm

Location: room 2

Chairs:Pr. Adel M. Alimi, Regim-LAB, University of Sfax, Tunisia

Pr. Thierry Moniquet, Consulting International Strategy, Morocco

Informatization and Iconomy

Michel Volle
Institute of Iconomy, France

Biography

Michel Volle (born 1940 in Bergerac) is a french economic theorist, writer, public speaker, political advisor, and activist. Volle most intrest is about the articulation between mind and action. Being interested in the social/economical phenomenon of computerization, he studied intensively technological changes, and particularly, the informatization revolution, and their impact on society and the economy. Volle graduated from Ecole Polytechnique (1960), and ENSAE (1965). He is doctor in Economic History (1980). Administrator in the INSEE, M. Volle was alternatively researcher and Division Chief Statistic of entreprises et Comptes trimestriels. He has been teaching the data analysis, at ENSAE and at CEPE from 1973 to 1982.

Abstract

From 1975 onwards the technical system, previously built on the synergy of mechanics, chemistry and energy, was supplanted by a technical system that is dominated by the synergy of electronics, software and the Internet. The institutions, especially businesses, are then entered a transitional phase: their organization is destabilized, their mission is reformulated. The current economic crisis is due to the inadequate behavior of institutions, consumers and States to the "new nature" that informatization let emerge. To get out of a crisis, you have to know where to go. We must therefore steer the strategy, taking as reference the model of a society and an economy which are by assumption mature and therefore, as economists say, efficient. We call this model iconomy. It shows the necessary conditions of efficiency: a society that does not respect them cannot reach the efficiency in the new technical system. Here are its main results:

– repetitive tasks being automated, the marginal cost of products is negligible;

– the iconomy being capital-intensive, the risk of the entrepreneur is maximized;

– informatization giving arms to predators, the law and the judicial system must contain the predation;

– the cost function being increasing returns, the market obeys the regime of monopolistic competition;

– each product is diversified in varieties that differ in their qualitative attributes and respond each to a segment of needs; – each product is a package of goods and services, developed by a partnership;

– the intensity of innovation depends on the regulation of the duration of a temporary monopoly;

– employment lies mainly in the design of products and the engineering of their production, and in the services the product includes: manual work is replaced by mental work;

– service jobs, in particular, require discernment and a high relational competence;

– the hierarchical organization has been replaced by a collaborative organization that practices the trade of consideration;

– the secret of effectiveness is the quality of the relationship between the mental work and the ubiquitous programmable automaton where lies the computing resource.

In total, the iconomy is an economy of quality, competence and risk. This model illuminates the present situation:

– the essential phenomenon is the informatization of the productive system and not the use of smart phones, social networks etc. to which attention is focused;

– "intelligence" is not "artificial": it doesn't lay in programs, but in the minds of programmers and the action of producers;

– the main dangers are not "too much information kills information" nor "automation kills jobs": to the economy of competence corresponds a middle class society;

– the main danger is that of a return to feudalism: predation could destroy the rule of law and democracy

ISDA - Oral Session 16

Time: 04:00pm – 05:00pm

Location: room 1

Chair: Pr. Driss El Ouadghiri, Faculty of Sciences, Moulay Ismail University, Meknès, Morocco

#87	**Optimization techniques of static 3D triangular mesh compression : A survey**

Soumaya Hachicha, Akram Elkefi and Chokri Ben Amar

REGIM-Lab.: REsearch Groups in Intelligent Machines, University of Sfax, ENIS, BP 1173, Sfax, 3038, Tunisia

#20	**Multi-Agent 3D Reconstruction of Human Femur from MR Images**

Nachour Abdelhafid, Latifa Ouizizi and Youssef Aoura

ENSAM, Ecole Nationale Superieure d'Arts et Meiters, Moulay Ismail University Meknes, Morocco

#121	**Towards a parallelization and performance optimization of Viola and Jones algorithm in heterogeneous CPU-GPU mobile system**

Agnès Ghorbel, Nader Ben Amor and Mohamed Jallouli

Computer and Embedded Systems Laboratory, Ecole Nationale d'Ingenieurs de Sfax (ENIS), Sfax, Tunisia

ISDA - Oral Session 17

Time: 04:00pm – 05:00pm

Location: room 2

Chair: Pr. Ilhem Kallel, Regim-LAB, University of Sfax, Tunisia

#130	**Adaptive architecture for medical application. Case study: evoked potential detection using matching pursuit consensus**

Tarek Frikha, Abir Hadriche, Rafik Khemakhem, Nawel Jmail and Mohamed Abid

CES Lab, Regim Lab, ATMS Unit, Miracl Lab, Sfax University, Tunisia
National Engineering School of Sfax, University of Sfax, Tunisia

#142	**RFID and XBee based Automated Verification of Put-away Operation for Warehouse Management Systems**

Burcu Bektaş and Hayriye Korkmaz

Computer Programming Gedik Vocational School Pendik, İstanbul/TURKEY
Faculty of Technology, Dept. of Electrical and Electronics Engineering, Marmara University, Istanbul, TURKEY

#140	**Embedded EEG localization error using separately lobe for electrodes configuration**

Rafik Khemakhem, Tarek Frikha, Abir Hadriche and Ahmad Ben Hmida

ATMS Unit, ISIM-Sfax , Sfax University - Tunisia
CES Lab, National Engineering School of Sfax, Sfax University - Tunisia
REGIM-Lab.: REsearch Groups in Intelligent Machines, University of Sfax, ENIS, BP 1173, Sfax, 3038, Tunisia

ISDA - Oral Session 18

Time: 04:00pm – 05:00pm

Location: room 3

Chair: Pr. Nizar Rokbani, Regim-LAB, University of Sousse, Tunisia

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#36 **Methods for Detection of Cyberbullying: A Survey**

Rekha Sugandhi, Anurag Pande, Siddhant Chawla, Abhishek Agrawal and Husen Bhagat

Department of Computer Engineering MIT College of Engineering Pune, India

#45 **Inference in junction trees using the belief function theory**

Oumaima Boussarsar, Imen Boukhris and Zied Elouedi

LARODEC, Universite de Tunis, Institut Sup´ erieur de Gestion de Tunis, Tunisia

#103 **TOPSIS using a mixed subjective-objective criteria weights for mutli-criteria ABC inventory classification**

Hadhami Kaabi and Khaled Jabeur

Universite de Tunis ´Institut Superieur de Gestion ´Tunis, Tunisia

Universite de Carthage ´Institut Superieur de Commerce et de Comptabilité´ Bizerte, Tunisia

ISDA - Oral Session 19

Time: 04:00pm – 05:00pm

Location: room 4

Chair: Pr. Hichem Karray, Regim-LAB, University of Sfax, Tunisia

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#102 **Deep Neural Network with RBF and Sparse auto-encoders for Numeral Recognition**

Mellouli Dorra, Hamdani Tarek and Adel Alimi

REGIM-Lab.: REsearch Groups in Intelligent Machines, University of Sfax, ENIS, BP 1173, Sfax, 3038, Tunisia

Taibah University, College Of Science And arts at Al-Ula, al-Madinah al-Munawwarah, KSA, Al-Madinah al-Munawwarah, KSA

#22 **A k-Nearest Neighbor Approach to Improve Change Detection from Remote Sensing: Application to Optical Aerial Images**

Azzedine Touazi and Djamel Bouchaffra

Centre de Développement des Technologies Avancées Division Architecture des Systèmes et Multimédia, Algiers, Algeria

Université des Sciences et de la Technologie, Houari Boumediene, Algiers, Algeria

#55 **Artificial Neural Networks for Demand Forecasting: Application Using Moroccan Supermarket Data**

Ilham Slimani, Ilhame El Farissi and Said Achchab

Al-Qualsadi Research and Development Team, National Higher School for Computer Science and System analysis (ENSIAS), Mohammed V, University Rabat, Morocco

Laboratory LSE2I, National School of Applied Sciences(ENSAO), Mohammed first University Oujda, Morocco

ISDA - Oral Session 20

Time: 05:30pm – 06:30pm

Location: room 1

Chair: Pr. Abir Hadriche, Regim-LAB, University of Sfax, Tunisia

#104	**Semantic-aware framework for Mobile Image Search**

Noura Bouhlel, Amel Ksibi, Anis Ben Ammar and Chokri Ben Amar

REGIM-Lab.: REsearch Groups in Intelligent Machines, University of Sfax, ENIS, BP 1173, Sfax, 3038, Tunisia

#7	**Dealing with temporality when inducing association rules from a retail database.**

Rafael Stoffalette João, Maria Do Carmo Nicoletti and Ana Maria Monteiro

DC-UFSCar S. Carlos-SP, Brazil;

FACCAMP and DC-UFSCar C. L. Paulista, S. Carlos-SP, Brazil

FACCAMP C. L. Paulista-SP, Brazil

#12	**Practical modeling of the SLA Life Cycle in Cloud Computing**

Adil Maarouf, Abderrahim Marzouk and Abdelkrim Haqiq

Computer, Networks, Mobility and Modeling laboratory, FST, Hassan 1st University, Settat, Morocco

e-NGN research group, Africa and Middle East

ISDA - Oral Session 21

Time: 05:30pm – 06:30pm

Location: room 2

Chairs: Pr. Ali Wali, Regim-LAB, University of Sfax, Tunisia

Pr. Hajar Mousannif, Faculty of Sciences Semlalia, Cadi Ayyad University, Marrakesh

#100	**A New Comparative Study of Ad hoc Routing Protocol AODV and DSR in VANET Environment Using Simulation Tools**

Said Benkirane and Abderrahim Beni Hssane

High School of Technology Essaouira, Cadi Ayyad University, Essaouira, Morocco,

ENSA Khouribga, Hassan First University, Settat, Morocco,

Faculty of Sciences Sidi Mohamed Ben Abdillah University, Fez, Morocco,

Faculty of Sciences ChouaïbDoukkali University El Jadida, Morocco

#123	**Minimum Unsatisfiability Based QoS Web Service Composition over the Cloud Computing**

Abderrahim Ait Wakrime and Said Jabbour

Univ. Orleans, INSA Centre Val de Loire, LIFO, EA 4022, F-45067, Orl ́eans, France. CRIL-CNRS, Universite Artois, France.

#136	**Ontology-Based Approach to Provide Personalized Search Results for Handicraft Woman**

Emna Rekik, Maha Maalej, Achraf Mtibaa and Faiez Gargouri

Higher Institute of Computer Science and Multimedia, University of Sfax, Tunisia

National School of Electronic and Telecommunications, University of Sfax, Tunisia

ISDA - Oral Session 22

Time: 05:30pm – 06:30pm

Location: room 3

Chair: Pr. Mohamed Ben Halima, Regim-LAB, University of Sfax, Tunisia

#115	**GPU-based Segmentation of Dental X-ray images using Active Contours Without Edges**

Ramzi Ben Ali, Ridha Ejbali and Mourad Zaied

REGIM-Lab.: REsearch Groups in Intelligent Machines, University of Sfax, ENIS, BP 1173, Sfax, 3038, Tunisia

#85	**Implementation of a Maximum Power Point Tracking fuzzy controller on FPGA circuit for a photovoltaic system**

Hanen Abbes

Laboratory of Computer and Embedded Systems (Lab-CES)

Laboratory of Sciences and Techniques of Automatic control & computer engineering (Lab-STA)

National School of Engineering of Sfax, University of Sfax, PO Box: 1173,3038 Sfax Tunisia.

#98	**Cloud discrimination using K Nearest Neighbors Classifier: Application to Dataset Generated by Sétif RADAR (Algeria) and MSG-SEVIRI Satellite Images**

Fatiha Mokdad, Boualem Haddad, Zineb Bala and Ilhem Tiblali

Laboratory of Image Processing and Radiation, University of Science and Technology Houari Boumediene, Algeria

ISDA - Oral Session 23

Time: 05:30pm – 06:30pm

Location: room 4

Chair: Pr. Yassine Aribi, Regim-LAB, University of Sfax, Tunisia

#132	**Quality Evaluation of Web Sites: A Comparative Study of some Multiple Criteria Decision Making Methods**

Rim Rekik, Ilhem Kallel and Adel M. Alimi

REGIM-Lab: Research Groups in Intelligent Machines, University of Sfax, ENIS, BP 1173, Sfax, 3038, Tunisia.

ISIMS: Higher Institute of Computer Science and Multimedia of Sfax

#23	**From Data to Wisdom : A New Multi-Layer Prototype for Big Data Management Process**

Imadeddine Mountasser, Brahim Ouhbi and Bouchra Frikh

LM2I laboratory, ENSAM Moulay Ismail University Marjane II, B.P. 4024, Meknès, Morocco;LTTI laboratory, ESTFSidi Mohamed Ben Abdellah University B.P. 1796 Atlas, Fès, Morocco

#33	**A new Hybrid Discrete Bat Algorithm for Traveling Salesman Problem using ordered crossover and 3-Opt operators for bat's local search**

Jihen Amara, Adel Alimi and Tarek M.Hamdani

REGIM-Lab: Research Groups in Intelligent Machines, University of Sfax, ENIS, BP 1173, Sfax, 3038, Tunisia.

Taibah University, College Of Science And arts at Al-Ula, al MAdinah al-Munawwarah, KSA

ISDA - Oral Session 24

Time: 09:00am – 10:00am

Location: room 1

Chair: Pr. Habib M. Kammoun, REGIM-Lab., University of Sfax, Tunisia

#64	**Drowsy Driver Detection by EEG Analysis Using Fast Fourier Transform**
	Mejdi Ben Dkhil, Ali Wali and Adel M. Alimi
	REsearch Groups in Intelligent Machines, University of Sfax, National School of Engineers (ENIS), BP 1173, 3038, Sfax, Tunisia
#9	**Maximal Frequent Sub-graph Mining for Malware Detection**
	Aya Hellal and Lotfi Ben Romdhane
	National School of Computer Science, Tunis University of Manouba, Tunisia;
	Higher Institute of Computer Science and Communication Technologies, Hammam Sousse, University of Sousse, Tunisia
#131	**Despikifying SEEG signals using a temporal basis set**
	Nawel Jmail, Martine Gavaret, Fabrice Bartolomei and Christian Bénar
	Sfax University, MIRACL, Sfax, Tunisia
	Aix-Marseille Université, Faculty of Medicine, INSERM, Institut de Neurosciences des Systèmes, UMR 1106, Marseille, France

ISDA - Oral Session 25

Time: 09:00am – 10:00am

Location: room 2

Chair: Pr. Chokri Ben Amar, Regim-LAB, University of Sfax, Tunisia

#21	**Comparison of E-readiness Composite Indicators**
	Lamriq Rabii and Doukkali Abdelaziz
	TIES Team ENSIAS, Med V University Rabat, Morocco
#59	**A Framework for Supporting the Choice of Usability Evaluation Methods for Interactive Adaptive Systems**
	Amira Dhouib, Abdelwaheb Trabelsi, Christophe Kolski and Mahmoud Neji
	Miracl Laboratory, Faculty of Economics and Management Sciences, University of Sfax, B.P. 1088, Sfax 3000 Tunisia
	LOGIQ; Faculty of Sciences Sfax, University of Sfax, B.P. 1088, Sfax 3000 Tunisia
	LAMIH-UMR CNRS 8201, University of Valenciennes and Hainaut-Cambrésis, Valenciennes, France
#77	**Performance evaluation of RED approach for traffic lights management**
	Said Alabdallaoui, Idboufker Noureddine and Abdelghafour Berraissoul
	LR-11-ES17 Signal, Images et Technologies de l'Information (LR-SITI-ENIT), Université de Tunis El Manar, Ecole Nationale d'Ingénieur de Tunis, 1002, Tunis Le Belvédère, Tunisie

ISDA - Oral Session 26

Time: 09:00am – 10:00am

Location: room 3

Chair: Pr. Amine Berqia, ENSIAS, Mohammed V University, Rabat, Morocco

#72	**An extended approach for the behavioral and temporal constraints specification of reactive agent**
	Abdelhay Haqiq and Bouchaïb Bounabat
	Alqualsadi research team ENSIAS, Mohammed V University Rabat, Morocco
#147	**Performance evaluation of classification algorithms by excluding the most relevant attributes for dipper/non-dipper pattern estimation in Type-2 DM patients**
	Zehra Aysun Altikardes, Hasan Erdal, Ahmet Fevzi Baba, Ali Serdar Fak and Hayriye Korkmaz
	Marmara University, Vocational School of Technical Sciences, Dept. of Computer Technologies, Istanbul, Turkey
	Marmara University, School of Medicine, Department of Internal Medicine, Istanbul, Turkey
	Marmara University, Faculty of Technology, Department of Electrical & Electronics Engineering, Istanbul, Turkey
#88	**Evaluating Decision Support Systems: A Literature Review**
	Khaoula Boukhayma and Abdellah Elmanouar
	ENSIAS Engineering School Mohammed V University

ISDA - Oral Session 27

Time: 09:00am – 10:00am

Location: room 4

Chair: Pr. Nizar Rokbani, Regim-LAB, University of Sousse, Tunisia

#74	**Implementation of skin color selection prior to Gabor filter and neural network to reduce execution time of face detection**
	Mejda Chihaoui, Akram Elkefi, Wajdi Bellil and Chokri Ben Amar
	REsearch Groups in Intelligent Machines, University of Sfax, National School of Engineers (ENIS), BP 1173, 3038, Sfax, Tunisia
#128	**Video event detection using auto-associative neural network and incremental SVM models**
	Mohamed Chakroun, Ali Wali, Yassine Aribi and Adel M. Alimi
	REGIM-Lab. REsearch Groups in Intelligent Machines, University of Sfax, National School of Engineers (ENIS), BP 1173, 3038, Sfax, Tunisia
#144	**A New Image Segmentation Approach using Community Detection Algorithms**
	Youssef Mourchid, Mohammed El Hassouni and Hocine Cherifi
	LRIT URAC 29, University of Mohammed V-Agdal, Rabat, Morocco
	LE2I UMR 6306 CNRS, University of Burgundy, Dijon, France

Planary Talk VI

Time: 10:00am – 11:00am

Location: room 1

Chairs: Pr. Amine Berqia, ENSIAS, Mohammed V University, Rabat, Morocco

Pr. Chokri Ben Amar, Regim-LAB, University of Sfax, Tunisia

Visualization and Research Reproducibility?

Layth Sliman

EFRI, France

Biography

completed his Diploma in Computer Engineering. Then he obtained his masters in Computer Science (Information systems) in INSA Lyon- France and then his PhD from INSA Lyon, in collaboration with the university of the Ryukyus, Japan. In 2003, he underwent training in Development and Implementation program in Computer Software Applications in CMC-TATA, New Delhi, India. In the same year, he also underwent another training in Information and Communication Technologies in MEIO University and Okinawa International Center, Japan. In 2008, 2009 2010, 2012, 2013 and 2014 he did many research stays on Digital Rights Management and image processing in the University of the Ryukyus and Ritsumeikan University - Japan. During the period 2000-2010, he worked as lecturer and assistant professor, did his research and taught Computer Engineering and Information Systems in many universities including INSA, Lyon, the university of the Ryukyus in Japan, Beijing University of Technology, South China University of Technology China, and the Insitute of Visual Informatics in Malaysia. Since September 2010 he is associate professor in EFREI, a French engineering school located in Paris. He is also the head of the Business Intelligence Program at EFREI, president of Olab-Dynamics Association for Interdisciplinary Scientific Cooperation and Technology Transfer. His is a research fellow in many international institutes. His main topic is Collaborative Information Systems. This involves many topics including Web 2.0, , IS Architecture, IS Security, Cloud Computing, SaaS, Semantic Web and semantic SOA.

Abstract

Nowadays, running tests and visualize simulations becomes an essential part of scientific findings validation and experimentation. It becomes crucial to researchers to launch simulations and scripts to evaluate and test their models and algorithms on computer platforms. However, research dissemination methods suffer from a major lack in that they do not allow real test of the code and scripts used to validate the findings in the published papers. Furthermore, conventional simulation software have solely been designed to allow online and crowd sourcing, testing and visualization of implementations and experimentations outcomes. In this speech, I'll try to review the on-going development project of Exec&Share Platform as a Service simulation suites dedicated to research community. "Exec&Share" is supported by many academic and research organizations in many countries. The platform enables scientists to openly collaborate, share and visualize the outcome and data underlying their research publications. Relying on the powerful parallel processing feature of the grid-based platform and on its innovative concepts, the platform provides a Benchmarking features i.e. it allows launching effortlessly and simultaneously a collection of simulations codes and scripts using the same set of input data and the same or different running environments. Furthermore, the recent development of the platform will allow a very sophisticated features of Visual simulation and interactive visualization dedicated to many very important research domains including Bio-technology and Visualization of high frequency financial data.

Planary Talk VII
Time: 10:00am – 11:00am
Location: room 2
Chairs: Pr. Michel Voll, Institiute of Iconomy, France
        Pr. Jaouad Dabounou, Hassan 1st University, Settat, Morocco

To ally Data and Narration in Analytics for radically improved Decision Process

Thierry Moniquet
Consulting International Strategy, Morocco

Biography

Graduated MsC in social and economics science and MsC Territorial Development, Thierry Moniquet has developed his professional expertise in Institutional Communication, Public Affairs and Strategic Intelligence. He has coordinated European projects and networks in EU programs. For instance, he has developed inter-cluster networks in ASD (Aeronautics Space Defense) industry. He intervened as expert in international missions for industrial clusters set-up like in Russia. He advised governmental bodies to implement international program management units like in Balkans. He carried out missions as scientific advisor for Institut des Hautes Etudes pour la Science et la Technologie - IHEST - du Ministère français de la Recherche : he organized European high level seminars for IHEST's auditors on the topics of innovation systems in Europe. He acquired therefore specific expertise in the matter of Innovation, Governance and Clusters. More recently, he has anchored its expertise in Moroccan market. Since 2011 he has succeeded to conceive and create a cluster labeled by the Moroccan government: MENARA cluster in Marrakech specialized in upper scale and lux agro-food and cosmetics products. He is coaching start-ups and entrepreneurs in helping them to optimize strategic communication in order to create industrial and financial partnerships, to organize the foundations of their marketing strategy and to adopt an economic and business diplomacy. He coached the creation of a professional association, the Federation of the Moroccan Snail supply chain.

Along this experience, Thierry Moniquet has built his capacity as a methodologist. Communication is at the core of the methodological frameworks he developed in the context of his missions. In particular, storytelling, narrative and design thinking techniques are central to his works and his methods of intervention. For instance, storytelling is used as an important tool of Strategy Analyze, as well as for in partnership's and network's management or Branding (brand culture). With young Moroccan designers, he develops research about Smart Cities and visualization techniques. In this context, narrative data, narrative visualization data are becoming top priority topics in his research and studies. More generally these conceptual and methodological developments led him to work on experimental methodologies in education and pedagogical engineering.

Abstract

With the Big Data and the Cloud Computing, a new area of development is growing very rapidly. New names are arousing for designating this new strand of creation and expertise: "story data", "narrative data", "narrative visualization data", etc.... Behind these expressions, a new corpus of expertise and know-how is under way of consolidation.As Edward Segel and Jeffrey Heer, noted in their article " Narrative Visualization: Telling Stories with Data", on vis.standford.edu (Stanford visualization group) , "Crafting successful "data-stories" requires a diverse set of skills. Gershon and Page [12] note that effective story-telling "require[s] skills like those familiar to movie directors, beyond a technical expert's knowledge of computer engineering and science." While techniques from oration, prose, comic books, video games, and film production are applicable to narrative visualization, we should also expect thisemerging medium to possess unique attributes. Data stories differ in important ways from traditional storytelling. Stories in text and film typically present a set of events in a tightly controlled progression. While tours through visualized data similarly can be organized in a linear sequence, they can also be interactive, inviting verification, new questions, and alternative explanations. Storytelling is already a technique largely used in public relations, marketing for creating a brand culture and image. In strategy analysis, it constitutes a complementary method for analyzing situations and organizations. Emotional Intelligence mobilized through the conception of a storytelling and Logical Intelligence based on data analytics can be combined to achieve the most accurate level of analyze. But the revolution of Big Data and Cloud modifies radically the interaction between the two intelligences. Big Data and Cloud Computing are expanding data we can collect, analyze and interpret about any realities. It permits us to develop the knowledge and understanding of realities and situations at so high levels that hard never reached before. But, in the same time, it reveals an even more complexity of these ones and the importance of the emotional intelligence along the logical one in the process of knowledge creation.That's what Kris Hammond, Ph.D. from Yale, co-founder and chief scientist at Narrative Science and professor of computer science at Northwestern University, Founder the University of Chicago's Artificial Intelligence Laboratory expressed succinctly as follows: "People have a hard time understanding data. That's why data scientists and analysts are often asked to convert their findings into narrative reports. People with interpretive skills are turning that data into the thing that most of us easily understand: narratives explaining what is going on in the world based on evidence provided by the data. Likewise, the data associated with us as individuals, including the wealth of data from the emerging Internet of Things will be transformed into reports that real people will be able to read and understand. Rather than seeing data, they will see stories of their own lives mapped out for them based on artificial intelligence language systems looking at their data and explaining it to them. Data associated with their homes, cars, health, exercise, and fitness will become the clear, clean narratives that will be the stories of their lives. The days of thinking of data as the end game are over. We now are entering the era of the narrative – narratives generated by systems that understand data, narratives that give us information to support the decisions we need to make about tomorrow. Data will always be important, but the story of that data is the last mile." (In "The end of Big Data: AI and The Rise of Narrative", March 6 2015, www.datainformed.com). The "story of the data" is not only a necessity to make understandable the significance of a data for "real people". It offers new dramatic creative perspectives. Big Data is indeed an extraordinary opportunity to enlarge and renew traditional narrative techniques like storytelling and their applications. As Daniel Weisberg, Analytics Advocate, Google explains: "Marketers are responsible for messaging; as such, they' ™re often the bridge between the data and those who need to learn something from it, or make decisions based on its analysis. By rethinking the way we use data and understanding our audience, we can create meaningful stories that influence and engage the audience on both an emotional and logical level."

ISDA - Oral Session 28

Time: 11:30am – 12:30am

Location: room 1

Chair: Pr. Ilhem Kallel, Regim-LAB, University of Sfax, Tunisia

#10	**Biomedical Concepts Extraction based Information Retrieval Model: application on the MeSH**
	Mondher Sendi and Mohamed Nazih Omri
	MARS Research Unit, Faculty of Sciences of Monastir, University of Monastir, 5019 Monastir, Tunisia
#70	**Rhythm Metrics in MSA pokenLanguage of Six Algerian Regions**
	Ghania DrouaHamdani andMalika Boudraa
	Speech Processing Laboratory CRSTDLA Algiers, Algeria
#139	**Compact Genetic Algorithms with larger tournament size for soft-Decision Decoding**
	Ahlam Berkani, Ahmed Azouaoui, Mostafa Belkasmi and Bouchaib Aylaj
	Mohammed V-Rabat University, SIME labo, ENSIAS FS - El Jadida, Chouaib Doukkali University, Morocco

ISDA - Oral Session 29

Time: 11:30am – 12:30am

Location: room 2

Chair: Pr. Ali Wali, Regim-LAB, University of Sfax, Tunisia

#29	**Qualitative AHP Models under the Belief Function Framework**
	Amel Ennaceur, Zied Elouedi and Eric Lefevre
	LARODEC Universite de Tunis, Institut Supérieur de Gestion ´ Tunisie;
	LGI2A, Univ. Artois, EA 3926, Bethune, F-62400, France
#127	**Degeneration simulated annealing algorithm for combinatorial optimization problems**
	Bouchaib Aylaj, Belkasmi Mostafa, Hamid ZOUAKI and Ahlam BERKANI
	Department of Maths, LIMA, Faculty of Sciences, SIME Labo, ENSIAS, Chouaib Doukkali University, Mohammed V University El jadida, 2,4Rabat, Morocco
#94	**A cooperative learning strategy with multiple search mechanisms for improved artificial bee colony optimization**
	Fatima Harfouchi and Hacene Habbi
	Applied automation laboratory University of Boumerdès, Boumerdès, Algeria

ISDA - Oral Session 30

Time: 11:30am – 12:30am

Location: room 3

Chair: Pr. Mohamed Ben Halima, Regim-LAB, University of Sfax, Tunisia

#63	**Towards a secure access control model for E-learning platform based on multi agent systems**
	Kassid Asmaa and El Kamoun Najib
	STIC Laboratory ChouaibDoukkali University El Jadida, Morocco
#108	**Agent-based system simulation of Electronic Commerce : Effect of cut-link on prisoner's dilemma with small world topology**
	Jalal Eddine Bahbouhi and Moussa Najem
	LAROSERI, Department of Computer Science University of Chouaib Doukkali EL Jadida, Morocco
#129	**Algorithm for Time-Constrained Paths to Deliver Services**
	Raija Halonen, Olli Martikainen, Valeriy Naumov and Ye Zhang
	Department of Information Processing Science, University of Oulu, Oulu, Finland
	Pikesta Oy Lönnrotinkatu 30 D, 4 krs Helsinki, Finland
	PIKE Lönnrotinkatu 30 D, 4 krs Helsinki, Finland

ISDA - Oral Session 31

Time: 11:30am – 12:30am

Location: room 4

Chair: Pr. Ilhem Kallel, Regim-LAB, University of Sfax, Tunisia

#69	**Towards an Intelligent Decision Support System for Renewable Energy Management**
	Hamza Sellak, Brahim Ouhbi and Bouchra Frikh
	LTTI laboratory, ESTF, Sidi Mohamed Ben Abdellah University, B.P. 1796 Atlas, Fez, Morocco
#93	**Toward an Optimal Medical Image Compression based on ISOM**
	Imen Chaabouni, Wiem Fourati and Medsalim Bouhlel
	ISBS-University of Sfax, Tunisia
#113	**Knowledge Structures: Which one to use for the query disambiguation?**
	Ghada Feki, Rim Fakhfakh, Anis Ben Ammar and Chokri Ben Amar
	REsearch Groups on Intelligent Machines (REGIM-Lab.), University of Sfax, National Engineering School of Sfax (ENIS), Sfax, Tunisia
#119	**Requirement-Based Lexical Web Service Generation**
	Mehdi Ben Abderrahmen, Bilel Gargouri and Mohamed Jmaiel
	University of Sfax, ReDCAD Laboratory ENIS, B.P 1173, 3038 Sfax, Tunisia
	University of Sfax, MIRACL Laboratory, ISIMS,Technological pole of Sfax, Tunis Road Km 10 BP. 242, 3021 Sfax, Tunisia;
	Research Center for Computer Science Multimedia and Digital Data Processing of Sfax B.P. 275, Sakiet Ezzit, 3021 Sfax, Tunisia